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ABSTRACT

In response to criticism of methods courses, this paper takes the position that the development of a body of knowledge concerning professional practices is central to the education of professional teachers. Focusing on the complexity of the teaching situation, a discussion is presented on the importance of mastering methods and models of teaching. Three basic dimensions of the action-situation relationships facing the teacher in the multidimensional, immediate, and unpredictable classroom are considered: (1) a goal state or end product to be achieved, (2) a problem space or set of conditions and resources available to research the goal state, and (3) the operations involved in assembling and using available resources. It is pointed out that teachers must organize groups of students, establish rules and procedures, elicit students' cooperation in classroom activities, and sustain order for designated blocks of time across several months. Instructional methods offer a way to bring some order to this complex situation. (JD)

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METHODS AND MODELS AS PROFESSIONAL KNOWLEDGE

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Methods and Models as Professional Knowledge

Central to the education of professional teachers is development of a body of knowledge concerning professional practices. Just as teachers need to have knowledge about the content they wish to teach, about educational ends and purposes, and about their students (Shulman, 1987), teachers also need to know and be able to use a wide variety of instructional practices. Instructional practices are the means by which teachers help students obtain educational goals and objectives. Instructional practice is the professional practice of teachers.

Curiously, one of the most maligned aspects of teacher education are courses designed for education in the knowledge of instruction--methods courses. This aspect of teacher education is criticized by teachers as being too restrictive (Johnston, 1984) and by others as being emphasized at the expense of preparation in subject areas (A Nation at Risk, 1983). Yet, Socrates, Pestalozzi, Froebel, Herbart, and Dewey are all known for their methods and viewed methods as a key to educational effectiveness (Broudy, 1963).

Perhaps part of the disparagement of methods was a result the inconclusiveness of the search for the "best" method. In 1959, for example, a team commissioned to review research on effective teaching (American Association of School Administrators) found that no specific instructional method could be pinpointed that would necessarily enhance instructional effectiveness (Combs, Bluem, Newman & Wass, 1974). Along this same line, a 1968 review of college teaching methods and student

achievement found 51 percent favored lecture method but almost as many (49 percent) favored discussion method (Gage, 1972).

After findings like these, the search for the "best" method was abandoned in favor of research on specific teacher behaviors that might be associated with effective teaching. This process--product paradigm produced a host of specific teaching behaviors such as teacher clarity, lesson openings, modeling, feedback and the like. The closest this paradigm came to a method of teaching is the direct instruction and active teaching models of instruction (Shulman, 1986). If there were thoughts of direct instruction becoming the new "best" method, they were abandoned when direct instruction was found not be as effective when prior knowledge of the learner interfered or when analyzing the meaning of readings were called for (Anderson, 1989). This finding was a result of research from a cognitive--mediational paradigm which characterizes learners as active, constructive problem solvers and focuses on teacher--student interactions (Anderson, 1989a; 1989b).

The cognitive perspective when applied to teaching reminds us of the complexity of the teaching situation. Doyle (1986), using a cognitive perspective, described the complexity of the classroom environment as having the features of multidimensionality, simultaneity, immediacy, unpredictability, publicness, and history. It is precisely because of the complexity of teaching that methods and models of teaching should be considered essential professional knowledge.

The concept of "task" is useful here. Task

> calls attention to three basic dimensions of action--situation relationships: (a) a goal state or end product to be achieved; (b) a problem space or set of conditions and resources available to research the goal state; and (c) the operations involved in assembling and using available resources (Carter & Doyle, 1987, p. 148).

According to Carter and Doyle, one of the tasks teachers must attend to is "representing and enacting the curriculum . . . Teachers must, in other words, organize groups of students, establish rules and procedures, elicit students' co-operation in classroom activities, and sustain order for designated blocks of time across several months" (p. 148). Instructional methods offer a way to bring some order to this incredibly complex situation.

Method comes from the Greek word methodos, which "literally means a way, or a path, of transit" (Buchler, 1961, p. 36). Methods apparently were created because humans were overwhelmed by the complexity of certain tasks. Methods take complex situations, such as classroom settings, and provide a useful means of control or power. Indeed, a common expression is "the power of a method" (Buchler, 1961, p. 101).

Methods have two parts: an activity and a goal. The activity is the recognizable way or plan to do something in order to achieve some goal. Because the plan is recognizable, it can be practiced and a person can become better at it by following the procedure or guidelines set forth in the plan (Buchler,

1961). Indeed, one way of viewing a method "is simply a plan that you use twice" (Newell & Simon, 1972, p. 835). Through learning and practicing a method, behavior becomes organized to "bear a rational relation to solving a problem," achieving the aim, or producing a solution (Newell & Simon, 1972, p. 835).

In education, method (like model) covers both strategies and tactics of teaching and "refers to the formal structure of a sequence of acts commonly denoted by instruction" (Broudy, 1963, p.3). Instructional methods help teachers solve problems through organizing instructional tasks to achieve educational aims, i.e., to help students learn. Instructional methods (strategies and techniques) are concerned with the ways teachers organize instruction, subject matter, and teaching materials to reach teaching objectives; like models of teaching, they provide guidelines for designing educational activities and environments (Clark & Starr, 1976; Joyce, 1978). Viewed in this light, instructional methods, including models, strategies, and techniques, are part of the specialized knowledge base of professional teachers concerned with professional practice.

To disparage instructional methods simply because they are methods, as Buchler (1961) has suggested, seems "on the surface, to mean defense of purposelessness, and of the eccentric position that floundering may be better than planning" (p. 161). To disparage instructional methods or models because teaching is complex and schools and situations differ is to overlook the role schemas play in "ordering knowledge and accounting for ambiguities in passages or situations" (Carter & Doyle, 1987, p.

149). A well developed schemata of methods can provide a framework for structuring and interpreting instruction. Just as the sentence "Michael entered a restaurant" allows the reader "to infer what is likely to happen" (p. 149). The sentence "Ms. Jones lead a discussion about Moby Dick" ought to tell teachers and students alike what likely happened.

One mark of a profession is a long period of socialization into the knowledge and skills of that profession. Such is the case with instructional methods. It takes many hours of study and observation to learn about an instructional practice and upward to 15 to 20 practice attempts with feedback to be able to use it fluidly and appropriately (Joyce and Showers, 1983): for it to become part of a teacher's schema. The problem with methods courses may not be too much emphasis, but instead, that not enough time is allotted in teacher education programs for students to adquately learn the theory and practice the skill.

It is generally recognized that there is no one best method or strategy of teaching and that a skillful teacher must have many methods in his or her repertoire (Clark & Starr, 1976; Joyce, 1978). Furthermore, it has become recognized that each teacher must have knowledge in generic instructional methods or general pedagogical knowledge, as well as content--specific instructional methods or pedagogical content knowledge (Gideonse, 1989; Shulman, 1987). Viewing methods from a problem solving perspective, goals of instruction, or "goal states" in problem solving parlance, and their accompanying elements (Newell, 1980) of students, subjects, and classrooms suggest the need for different methods (Hoover, 1982).

Teachers are expected to help students meet a multitude of social, personal, and academic goals. Three minimum academic expectations are that students should:

1. learn basic information and skills;
2. assign meaning to information and skills;
3. generate and apply information and skills.

These goals reflect societal expectations of teachers: to help students learn the culture and basic skills; to help students learn subjects in sufficient depth to produce conceptual change on the part of students; and, finally, to help students learn how to solve problems in and out of school settings (Anderson, 1989; Scardamalia & Bereiter, 1989).

Teaching is too complex for a simple martix matching objectives with methods. Furthermore, objective domains and methods tend to overlap (Joyce, 1978). Still, recognizable and purposeful instructional practices do exist, based on both research paradigms and traditional practices, that can be used by teachers to help students achieve different academic goals. A thorough understanding of instructional methods should be a part of every teachers knowledge base, including knowledge about the theory and research underlying various methods, as well as the procedural knowledge and accompanying practice.

A thorough understanding of different research paradigms and associated practices could inform teachers in exercising professional judgment in teaching. Knowing when and how to use various instructional practices is vital professional knowledge. For example, what teachers need to do to help students learn

basic information and skills has been the major focus of the process--product research paradigm associated with teaching effectiveness. As mentioned earlier, this body of work has contributed to direct instruction and active teaching conceptions of instruction (Shulman, 1986). Other concepts associated with this paradigm include such things as teacher clarity, lesson openings, modeling, monitoring of instruction, feedback, time--on--task, and closure. Not only are these instructional practices associated with effective teaching, but they also add a research base to traditional instructional practices such as lecture, drill and practice, and recitation. Knowledge about the results of the process--product research paradigm and the methods it complements would clearly aid a teacher in making professional decisions.

Yet, as important and necessary as the above methods are, they are not sufficient to represent a complete knowledge base. To help students assign meaning to information and skills and to generate and apply information and skills to solve problems in and out of school, the cognitive--mediational paradigm offers important approaches (Anderson, 1989a; 1989b). Mediated instruction and scaffolding are concepts associated with this perspective. Traditional methods designed to help students toward these goals include discussion, case, and inquiry. This perspective and sample methods would be an important addition to any teacher's understanding and repertoire of instructional practices.

Just as no one method will solve all instructional problems, no one paradigm is likely to either. What is needed is a

thorough understanding of a variety of instructional practices, their theory and research, as well as adequate practice in their use. Instructional practices can be learned systematically or haphazardly. What is clear from the beginning teacher and in-service literature is that adequate grounding in theory and practice for effective use of instructional practices takes a prolonged period of time.

What has been suggested is that knowledge of instructional practices are an important part of the knowledge base of professional teachers. It is the responsibility of teacher education programs to provide and generate knowledge of instructional practices for professional teachers. For not only does theoretical, research, and procedural knowledge of instructional practices--methods, strategies, and techniques--exist, but instructional practices constitute the professional practice of teachers.

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